AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of diagnosing cardiac syndromes, the method comprising the acts of:

acquiring data from a first type of diagnostic test;

processing the data from the first type of diagnostic test to produce an indicator;

acquiring data from a second type of diagnostic test different than the first type of diagnostic test;

processing the data from the second type of diagnostic test to produce a second indicator;

combining the indicators; and

calculating a risk of a cardiac syndrome based on the combination of indicators.

2. (Original) A method as set forth in claim 1, further comprising the acts of acquiring data from a third diagnostic test and processing the data from the third diagnostic test to produce a third indicator.

3. (Original) A method as set forth in claim 1, wherein the act of combining the indicators includes a Mamdani inference method.

4. (Original) A method as set forth in claim 1, wherein the act of calculating a risk of a cardiac syndrome includes a Mamdani inference method.

5. Canceled

6. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by an ECG acquisition module.

7. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by a biochemical testing module.

8. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by a history acquisition module.

9. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by a nuclear imaging module.

10. (Original) A method as set forth in claim 5, wherein the act of acquiring data from a first diagnostic test is performed by an ultrasonic imaging module.

11. (Currently amended) A method as set forth in claim ~~5~~ 2, wherein the act of acquiring data from ~~a~~ the ~~second~~ third diagnostic test includes acquiring diagnostic data ~~of a second type that differs from the diagnostic data acquired by the first diagnostic test~~ different than the data acquired by the first type of diagnostic test and the second type of diagnostic test.

12. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from an ECG acquisition module.

13. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from a biochemical testing module.

14. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from a history acquisition module.

15. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from a nuclear imaging module.

16. (Original) A method as set forth in claim 11, wherein the act of acquiring data from a second diagnostic test includes acquiring data from an ultrasonic imaging module.

17. (Currently amended) A method as set forth in claim 1, wherein the ~~method~~ risk is for diagnosing acute cardiac syndromes.

18. (Currently amended) A cardiac syndrome diagnostic system comprising:

a first cardiac activity acquisition device operable to generate a first cardiac activity data;

a second cardiac activity acquisition device operable to generate a second cardiac activity data;

one or more processors to generate a first and second indicator based on the first and second cardiac activity data, respectively; and

a fusion engine operable to receive the first and second indicators, generate a first and second set of degrees of membership based on the first and second indicators, and ~~generate~~ calculate a risk of a cardiac syndrome based on a combination of the first and second sets of degrees of membership and a set of predetermined rules.

19. (Original) A system as set forth in claim 18, wherein the fusion engine includes a fuzzifier.

20. (Original) A system as set forth in claim 18, wherein the fusion engine includes an inference engine.

21. (Original) A system as set forth in claim 18, wherein the fusion engine includes a defuzzifier.

22. (Currently amended) A system as set forth in claim 18, wherein the system diagnoses acute cardiac syndromes based on the calculated risk.

23. (Currently amended) A diagnostic system comprising:

a first physiological activity acquisition module;

a second physiological activity acquisition module different than the first physiological activity acquisition module; and

a fusion engine operable to receive data from the first and second modules, the data from the first module being different than the data from the second module, and to ~~generate~~ calculate a risk of ACS based on a combination of the data received from the first and second modules.

24. (Original) A system as set forth in claim 23, wherein the combination of the data received from the first and second modules is based on fuzzy logic algorithms.

25. (Original) A system as set forth in claim 23, wherein the first physiological activity acquisition module performs a first physiological test on physiological data of a first type.

26. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is an ECG acquisition module.

27. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is a biochemical testing module.

28. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is a history acquisition module.

29. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is a nuclear imaging module.

30. (Original) A system as set forth in claim 25, wherein the first physiological activity acquisition module is an ultrasonic imaging module.

31. (Original) A system as set forth in claim 25, wherein the second physiological activity acquisition module performs a second physiological test on physiological data of a second type that is different than the first type of physiological data.

32. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is an ECG acquisition module.

33. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is a biochemical testing module.

34. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is a history acquisition module.

35. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is a nuclear imaging module.

36. (Original) A system as set forth in claim 31, wherein the second physiological activity acquisition module is an ultrasonic imaging module.

37. (Original) A method for diagnosing acute cardiac syndromes ("ACS"), the method comprising the acts of:

acquiring ECG data;

processing the ECG data to produce an ECG indicator;

acquiring biomarker data;

processing the biomarker data to produce a biomarker indicator;

combining the indicators; and

calculating a risk of ACS using fuzzy logic rules.

38. (Currently amended) A method of diagnosing cardiac syndromes, the method comprising the acts of:

acquiring data from a plurality of diagnostic tests;

processing the data from the plurality of diagnostic tests to produce a plurality of indicators;

combining the plurality of indicators; and

calculating a risk of a cardiac syndrome before an actual cardiac event has occurred based on the combination of the plurality of indicators.

39. (Original) A method as set forth in claim 38, wherein the cardiac syndrome is an acute cardiac syndrome.

40. (Currently amended) A method of determining a risk for a cardiac event in a patient, the method comprising:

acquiring physiological patient data from a plurality of medical modalities;

processing the physiological data to produce a plurality of indicators;

applying a set of input membership functions to each of the indicators to produce a degrees of membership for each of the indicators;

comparing a set of diagnostic rules to each of the degrees of membership for each of the indicators;

generating a rule output for each comparison;

combining the rule outputs to produce a combined output;

assigning the combined output an output function value; and

comparing the output function value to a plurality of output membership functions to ~~determine~~ calculate the patient's risk of a future cardiac event.

41. (Currently amended) A computer program embodied by a computer readable medium capable of being executed by a computer, the computer program for use in a cardiac risk prediction system, the computer program comprising:

instructions that acquire patient data from a plurality of medical modalities;

instructions that generate an indicator for the patient data acquired from each medical modality; and

instructions that fuzzify, compute, combine, and defuzzify the indicators to ~~determine~~ calculate a patient's risk for a future cardiac event.

INTERVIEW SUMMARY

This Interview Summary is further to the Examiner's Interview with the undersigned Applicants' Representative on July 30, 2004. During the Interview, U.S. Patent No. 5,690,103 ("Groth '103"), U.S Patent No. 6,361,503 ("Starobin"), U.S. Patent No. 6,142,078 ("Lachajewski"), and Claims 1, 18, 37, and 40 were discussed. Applicants' Representative submitted a proposed amendment prior to the interview. Applicants' Representative pointed out that Groth does not teach or suggest calculating a risk of a cardiac syndrome based on the combination of indicators. Applicants' Representative also pointed out that Starobin does not teach or suggest acquiring data from two different types of diagnostic tests. Further, Applicants' Representative pointed out that there is no suggestion or motivation to combine Groth '103 and Lachajewski. The Examiner agreed that Groth '103 does not teach or suggest calculating a risk of a cardiac syndrome based on the combination of indicators with respect to Claim 1. The Examiner also agreed that Starobin does not teach or suggest acquiring data from two different types of diagnostic tests with respect to Claim 1. An agreement with respect to the combination of Groth '103 and Lachajewski was not reached.